Appl. No.: 10/005,185 Filed: December 4, 2001

Page 2

Amendments to the Claims:

Claims 1-36 (Canceled)

- 37. (Currently amended) A hole forming system, comprising:
 - a base table;
 - a work piece table for supporting work pieces under process;
- a first drive system for moving the work piece table along a Y axis in relation to the base table;
 - a plurality of spindle stations;
- a ganged set of a plurality of spindles, each spindle for holding a hole forming tool, each spindle bearing being mounted on a common linear bearing for linear movement along an X axis which is transverse to said Y axis, the spindles of said ganged set commonly connected together;
- a computer-controllable spindle linear drive system for commonly driving said ganged set of a plurality of spindles along said X axis; and

Z axis drive system for individually driving said spindles along a Z axis which is transverse to said X and Y axis.

- 38. (Previously presented) The system of Claim 37 further comprising a controller for controlling said spindle linear drive system and said Z axis drive system to conduct hole forming operation's on a plurality of work pieces located at respective ones of said spindle stations.
- 39. (Previously presented) The system of Claim 37 further comprising adjustable mounting structure for mounting each spindle to said bearing system to align each spindle in the Z and X axis.
- 40. (Previously presented) The system of Claim 37, wherein said ganged set of a plurality of spindles comprises four spindles.

Appl. No.: 10/005,185 Filed: December 4, 2001

Page 3

- 41. (Currently amended) A hole forming system, comprising:
 - a base table;
 - a work piece table for supporting work pieces under process;
- a Y axis drive system for moving the work piece table along a Y axis in relation to the base table;
 - a plurality of spindle stations;
- a ganged set of a plurality of spindles, each spindle for holding a hole forming tool, comprising a spindle at each said spindle station, said plurality of spindles commonly connected together for common movement along an X axis which is orthogonal to said Y axis;
- a spindle linear drive system for commonly driving said ganged set of spindles along said X axis, wherein said spindle linear drive system includes:
 - a set of spindle slides for motion along the X axis, each slide supporting a corresponding one of said plurality of spindles:
 - a linear bearing for supporting said set of spindle slides for motion along the X axis:
 - a bar structure rigidly attached to each slide to gang together said set of slides in a spaced relationship on said linear bearing for motion as said ganged set along the linear bearing; and
 - a linear force applying structure for moving the ganged set of spindles along the X axis; and
- a Z axis drive system for driving said spindles along a Z axis which is orthogonal to said X and Y axis.
- 42. (Previously presented) The system of Claim 41 further comprising a controller for controlling said Y axis drive system, said spindle linear drive system, and said Z axis drive systems to conduct hole forming operations on a plurality of work pieces located at respective ones of said spindle stations.

Page 4

43. (Currently amended) The system of Claim 41 wherein said first set of spindles and said second set of spindles are arranged on a common plane which is orthogonal to said work piece table.

44. (Cancelled)

- 45. (Currently amended) The system of Claim [[44]] 41 wherein said linear force applying structure includes a servo motor coupled to a leadscrew, and a leadscrew nut threaded onto the leadscrew and secured to said the ganged set.
- 46. (Previously presented) The system of Claim 45 wherein said leadscrew nut is secured to one slide of said first set of slides.
- 47. (Currently amended) The system of Claim [[44]] 41 wherein said linear force applying structure includes a linear motor drive system including a set of stationary permanent magnets extending along the X axis and a coil attached to said ganged set.
- 48. (Currently amended) The system of Claim [[44]] 41 wherein said linear, bearing includes first and second linear guiding rails secured to an overhead beam supported over said work piece table, and, for each slide, a plurality of bearing slide members each attached to said slide and constrained for sliding movement along one of said linear guiding rails.
- 49. (Previously presented) The system of Claim 41, wherein said ganged set of a plurality of spindles comprises four spindles.